

REMARKS

The application has been reviewed in light of the Office Action mailed April 21, 2004. At the time of the Office Action, claims 4-6, 8-13, 18-25 were pending in this application, claims 4-6, 8-13, 18-25 were rejected.

Objection to the Claims

Claim 23 was objected to because of informalities. Claim 23 has been amended as helpfully suggested by the Examiner.

Rejections under 35 U.S.C. § 103(a)

Claims 4-6, 8-13, 18-25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 5,361,151 to Sonehara et al. (hereinafter "Sonehara") in view of JP 2000-89221 to Wai-Leung Yeung (hereinafter "Wai"). Applicants respectfully traverse the rejections and submit that Sonehara and Wai do not teach or suggest, individually or in combination, what is being claimed.

Sonehara is directed toward 100% efficient liquid crystal display systems where the light is circularly polarized at the reflector. Sonehara discovered that such systems do not occur for all values of $\Delta n d$, twist angle and polarizer angle, but rather are restricted to two narrowly defined regions of $\Delta n d$ and twist angle which are identified in Fig. 6B of the Sonehara patent, reproduced and attached hereto.

Referring to Figure 6B, Sonehara teaches a first (low) $\Delta n d$ region defined by points on a loop-like curve starting at $\Delta n d = 0.12 \mu\text{m}$ with 0 degree twist angle, extending up to $\Delta n d = 0.25 \mu\text{m}$ to a maximum twist angle of about 65 degrees, and then returning back to a zero degree twist angle at $\Delta n d = 0.4 \mu\text{m}$. Sonehara further teaches a second (high) $\Delta n d$ region

requiring $\Delta n d$ values in excess of $0.6 \mu\text{m}$. Neither the present invention nor the Wei reference use $\Delta n d$ values larger than $0.28 \mu\text{m}$.

Wei teaches a twist angle of 67-83 deg and a $\Delta n d$ between $0.18 \mu\text{m}$ to $0.28 \mu\text{m}$. This cannot be a 100% efficient solution, according to the teachings of Sonehara (where the light is circularly polarized at the reflector) because these parameters of the Wei liquid crystal display intersect neither of the Sonehara loop curves shown in Figure 6B.

Wai teaches a twist angle of 67 to 83 degrees, a polarizer angle β of 5 to 21 degrees, and a $\Delta n d$ (at $\lambda = 550 \text{ nm}$) of 0.18 to $0.28 \mu\text{m}$, see Figure A attached hereto. In contrast, the present invention uses a twist angle from about 70 to 90 degrees, a polarizer angle β of from about -13 to +13 degrees, and a $\Delta n d$ (at $\lambda = 550 \text{ nm}$) of from about 0.1 to less than about $1.8 \mu\text{m}$, see Figure B attached hereto. Thus, there is no teaching or suggestion in Wai of what is being claimed in the present invention.

According to what is taught or suggested in the references relied upon, Wai and Sonehara cannot be combined to produce a functional liquid crystal display. Modification unwarranted by the disclosure of a reference is improper. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *See* MPEP 2143. Combining Sonehara with Wai cannot produce what is being claimed in the present invention, as discussed above.

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination.

The motivation to combine references cannot come from the invention itself, nor may impermissible hindsight be used to pick and choose from the references relied upon.

Claims 4-6, 8-13, 18 and 20-22 depend from claim 19, and claims 24 and 25 depend from claim 23, and contain all limitations thereof. 35 U.S.C. § 112(3)(A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.)

All amendments are made in a good faith effort to advance the prosecution on the merits. Applicants reserve the right to subsequently take up prosecution on the claims as originally filed in this or appropriate continuation, continuation-in-part and/or divisional applications.

Applicants respectfully request that the amendments submitted herein be entered, and further request reconsideration in light of the amendments and remarks contained herein.

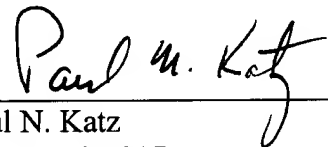
Applicants respectfully request withdrawal of all objections and rejections, and that there be an early notice of allowance.

SUMMARY

In light of the above amendments and remarks Applicants respectfully submit that the application is now in condition for allowance and early notice of the same is earnestly solicited. Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone or facsimile.

Applicants believe that there are no additional fees due not already included in the Petition for Extension of Time in association with the filing of this Response. However, should the Commissioner deem that any additional fees are due, including any fees for any additional extensions of time, Applicants respectfully request that the Commissioner accept this a Petition therefor, and direct that any additional fees be charged to, or any overpayments be credited to, Baker Botts L.L.P. Deposit Account No. 02-0383, *(formerly Baker & Botts, L.L.P.)*, Order Number 075115.0332.

BAKER BOTTS L.L.P. (023640)

By: 

Paul N. Katz
Reg. No. 35,917
One Shell Plaza
910 Louisiana Street
Houston, Texas 77002-4995
Telephone: 713.229.1343
Facsimile: 713.229.7743
Email: Paul.Katz@bakerbotts.com
ATTORNEY FOR APPLICANTS

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